

REMARKS

The last Office Action of June 4, 2007 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-28 are pending in the application. Claims 1, 8-10, 12-14, 19, 20, 28 have been amended. No claims have been canceled or added. Amendments to the specification have been made to correct obvious typographic errors. No fee is due.

Claims 1-4, 9, 12 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,129,806 to Hehl '806.

Claims 1-4, 9-10, 12, 21, 23, 28 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 4,443,179 to Wohlrab.

It is noted with appreciation that claims 5-8, 11, 13-20, 22, 24-27 are indicated allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. However, applicant wishes to defer amendments to these dependent claims in view of the arguments presented below regarding the amendments to the independent claims 1, 12, 28.

In order to clearly distinguish the present invention from the applied prior art, applicant has amended independent claims 1, 12, 28 by setting forth the securement of a piston rod of the primary piston to a platen for a half-mold of the injection molding machine, and by setting forth the acceptance of a piston rod of the primary piston in the recess of the secondary piston. Support therefore can be found in Figs. 1 and 5 and pertaining paragraphs [0031] and [0045]. More specifically, Fig. 1 shows a primary piston having a piston rod secured to the moving platen and received in the recess of the secondary piston, whereas Fig. 5 shows a primary piston having two piston rods, with one piston rod secured to the fixed platen and the other piston rod received in the recess of the secondary piston.

Claims 8-9, 13-14, 19, 20, 22, have been amended to make them consistent with the changes to claims 1, 12, 28, respectively.

Applicant respectfully disagrees with the Examiner's rejection of independent claims 1, 12, 28 for the following reasons:

With respect to the Hehl '806 reference, the Examiner now compares, contrary to the interpretation in the office action of March 6, 2006, the piston 43 of Hehl '806 to the primary piston of the invention and piston 25 of Hehl '806 to the secondary piston of the invention. Piston 43 of Hehl'806, however, is an annular piston which has - in contrast to the primary piston of the present invention - no piston rod. As a consequence Hehl '806 fails to disclose the presence of a piston rod connected to a platen. In addition, the piston 25 of Hehl'806 has - in contrast to the secondary piston - no recess in which the piston 43 is movable.

In summary, just like applicant's arguments with respect to the previously applied Hehl '366 reference, which arguments the Examiner accepted (cf. page 8, last paragraph of the current office action), the Hehl '806 reference thus fails to disclose the presence of a primary piston which includes at least one piston rod. If, for sake of argumentation, the secondary piston of the invention were to be equated with the annular piston 25 of Hehl '806, then Hehl '806 fails to disclose a secondary piston that forms a boundary of the pressure space at any axial disposition of the secondary piston.

With respect to the Wohlrab reference, it is noted that Wohlrab fails to disclose the claim limitation that the confronting contact surfaces of the primary piston (corresponds according to the Examiner to the integral unit of piston 13 and valve 23 of Wohlrab) and the secondary piston (piston 6 of Wohlrab) contact one another when the half-molds are clamped. A contact of valve 23 with the flat surface of piston 6 is, contrary to the Examiner's opinion, not mentioned in Wohlrab. Rather, it is implicitly disclosed in Wohlrab that no contact between these elements takes place:

Wohlrab discloses a movement of the valve 23 between a backward (closed) position, in which it blocks the passage between two pressure

chambers 11 and 22, and a front (open) position, in which it allows fluid communication between the pressure chambers 11 and 22 (cp. Wohlrab, col. 3, lines 53-57). Unnecessary travel of the valve 23 beyond the forward (open) position corresponding to a sufficiently great axial spacing between the valve element 23 and the cylinder for rapid flow from the chamber 22 is prevented by a stop 20, (cp. Wohlrab, col. 3, lines 4-8). In other words, travel beyond the front (open) position in direction to the piston 6 would theoretically be possible if no stop 20 was provided - this wouldn't be the case if the valve 23 was already in contact with the piston 6.

Wohlrab further describes that both the pressure chamber 11 and the pressure chamber 22 are existent in both positions of the valve 23 as separate chambers, (cp. e.g. Wohlrab, col. 2, lines 7-11, col. 3, lines 53-57, col. 4, lines 27-31, or col. 5, lines 7-10). Thus, the valve 23 cannot be in contact with piston 6 in any position, since the chambers 11 and 22 are only existent as separate chambers if there is no contact between valve 23 and the piston 6 (cp. Wohlrab, Fig. 1).

Furthermore, Wohlrab states that the valve element 23 is moved to the backward (closed) position, i.e. even further away from the piston 6, when the mold is closed (cp. Wohlrab, col. 4, lines 32-44). In contrast thereto, claims 1, 12, 28 expressly set forth a contact of the primary and secondary pistons when the half-molds are clamped.

Finally, the piston rod 13 of Wohlrab is not connected to a platen for one of the half-molds of the injection moulding machine.

For the reasons set forth above, it is applicant's contention that neither Hehl '806 nor Wohlrab teaches or suggests the features of the present invention, as recited in independent claims 1, 12, 28.

As for the rejection of the retained dependent claims, these claims depend on claims 1, 12, 28, share their presumably allowable features, and therefore it is respectfully submitted that these claims should also be allowed.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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